

Eryngium fontanum A.E. Holland & E.J. Thompson, (Apiaceae), a new species from Central Queensland

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Summary

Holland, A.E. & Thompson, E.J. (1994). *Eryngium fontanum* A.E.Holland & E.J.Thompson (Apiaceae), a new species from Central Queensland. *Austrobaileya* 4(2): 155–158. *E. fontanum* is described and illustrated. A conservation status of 2V is recommended. A key to the Queensland species of *Eryngium* L. is given.

Keywords: Apiaceae, *Eryngium* - Queensland, *Eryngium fontanum*.

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Introduction

There are approximately 230 species of *Eryngium* L. occurring in tropical and temperate parts of the world, mainly in Europe and the Americas, 12 species in Australia. The new species described here was first collected by the second author during The Desert Uplands Vegetation Survey in 1992. The mound springs, where this species occurs, were of particular interest from an ecological and conservation point of view. A recently described species of grass, *Sporobolus pamela* (Simon 1992), also occurs on these mound springs. Photographs of the habitat are included in Simon's paper.

Taxonomy

Eryngium fontanum A.E.Holland & E.J. Thompson, *sp. nov.*, *E. plantagineo* F.Muell. affinis, sed foliis omnibus integris, teretibus, cavibus et septatis non dimorphis, bracteis infernis folia similibus, integris et parvioribus (3–15 mm longis) et bracteis involucralibus parvioribus (3–6 mm longis) differt. **Typus:** Queensland. SOUTH KENNEDY DISTRICT: Mound springs south of Doongmabulla Homestead, 1 April 1992, E.J. Thompson GAL 27 & B.K. Simon (holo: BRI).

Erect, glabrous, herbaceous perennial to 1 m high. Roots fibrous. Leaves basal, rosulate,

sessile, erect, terete, to 40 cm long, 2–4 mm wide, entire, hollow and distantly septate, tapering to a fine point at apex, deep green. Inflorescences scapose, trichotomously paniculate; branches each subtended by a pair of leaf-like bracts. Inflorescence bracts (subtending inflorescence branches) opposite, sessile, narrowly triangular, subequal, 3–15 mm long, 1–2 mm wide, entire, with 3–7 longitudinal veins, pungent pointed at apex. Flowers sessile in terminal capitula; unit peduncles (subtending capitula) 4–7 cm long; capitula ovoid to conical, 6–9 mm long, 6–8 mm wide. Involucral bracts (subtending capitula) 5 large, and several smaller ones, triangular, 3–6 mm long, 1.5–2 mm wide; margins hyaline at base; apex pungent pointed; veins 3–5. Inner bracts (subtending individual flowers) ovate, 1.5–3.0 mm long, 1–3 mm wide, not exceeding flowers; margins hyaline; apex pungent pointed; veins 1. Uppermost bracts (at apex of capitula) similar to inner bracts, 2–3 mm long. Sepals ovate, 1.6–2 mm long, 0.7–1 mm wide, pointed at apex, persistent. Petals obovate, 0.8–1 mm long with upper part inflexed and equalling lower part, fimbriate at apex, white tinged blue. Styles c. 1.5 mm long, extending beyond sepals. Fruit obovoid, 1.7–2 mm long, 1–1.3 mm wide; testa with 10 faint ribs, dark brown, completely covered with inflated white scales; scales lanceolate, 1–2 mm long, tapered to a blunt point at apex, smooth. **Fig. 1.**

Other specimens examined: Queensland: SOUTH KENNEDY DISTRICT: Mound springs S of Doongmabulla Homestead, Mar 1993, E.J. Thompson GAL 152 & R. Henderson (AD, BRI).

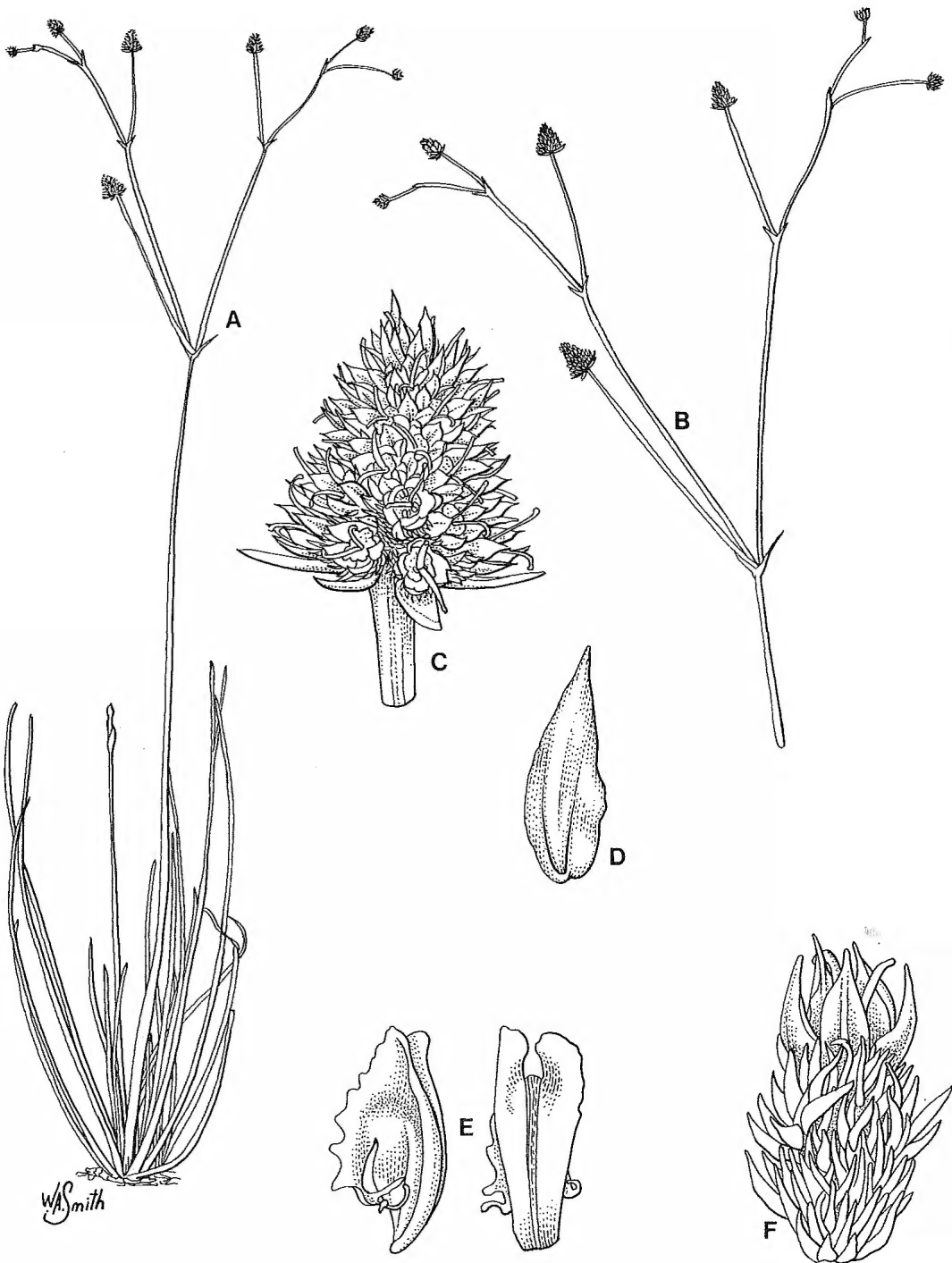


Fig. 1. *Eryngium fontanum*. A. habit $\times 0.33$. B. inflorescence branches, bracts and unit peduncles $\times 0.5$. C. flower head $\times 4$. D. inner bract $\times 12$. E. petal, side and back view $\times 24$. F. fruit with persistent calyx and inflated scales $\times 12$. A–F. Drawn from cultivated material from seed collected at the type locality on 1 Apr. 1992.

Distribution and habitat: *E. fontanum* is known only from the type locality on Doongmabulla station in central Queensland. It occurs in shallow permanent ponded water to c. 10 cm deep, within a grassland, predominantly of *Sporobolus pamelae*, on sandy flats. This emanates from several small mound springs believed to be connected to the Great Artesian Basin (Habermehl 1982, Ponder 1986). The total area of springs and surrounding grassland at this site is about 1 ha.

Phenology: Plants flower from December to April.

Conservation status: A recommended conservation status for this species is 2V using the criteria of Briggs and Leigh (1988). The population at the type locality contains about 200 plants but the species was not found in any similar sites in the area. The most immediate threat to this species is from cattle grazing and trampling. Depletion of the Great Artesian Basin is also a potential long-term threat.

Etymology: The epithet *fontanus* is derived from the latin *fons*, a spring, referring to the habitat of the species in and around springs.

Notes: *E. fontanum* has flowers and fruits similar to those of *E. plantagineum* F.Muell. It differs from that species in the much smaller involucre bracts and much smaller, entire inflorescence bracts (see key for dimensions). It does not show the heterophylly typical of *E. vesiculosum* Labill. as discussed by Webb (1984), and which has been observed in *E. plantagineum*. The leaves of *E. fontanum* resemble the 'winter' leaves of *E. plantagineum* but without the pungent pointed lobes or teeth at the apex. Leaves similar to the 'summer' leaves of *E. plantagineum* have never been produced in plants of *E. fontanum* during nearly two years of culture and have not been observed on plants in the field. The plants were grown from seed and flowered freely after two years growth.

Key to Species of *Eryngium* in Queensland

1. Flower heads 3–6 mm long, with fewer than 8 flowers; inflorescence bracts less than 2 cm long, deeply 3-lobed, or nearly orbicular, the lobes with 3–5 pungent teeth **E. expansum**
 Flower heads more than 6 mm long, with at least 10 flowers; inflorescence bracts 0.7–7 cm long, linear, triangular or oblanceolate, dentate, entire or divided into pungent lobes 2.
2. Plants prostrate or decumbent; flower heads sessile or with a unit peduncle up to 3 cm long 3.
 Plants erect; flower heads with unit peduncles 1–8 cm long 4.
3. Leaves all flat, obovate or oblanceolate, coarsely dentate, without a distinct petiole; flower heads hemispherical or ovoid; scales on mericarps short and blunt **E. vesiculosum**
 Leaves either flat, obovate and 3–5 lobed with a long petiole, or terete and septate; flower heads cylindrical; scales on mericarps long, acuminate **E. supinum**
4. Inflorescence bracts (subtending branches) 4–7 cm long, dentate or deeply divided; leaves either terete and septate with a few pungent teeth, or flat with pungent teeth; involucre bracts (subtending capitula) 18–30 mm long **E. plantagineum**
 Inflorescence bracts 0.3–1.5 cm long, entire; leaves all terete and septate, without any teeth or lobes; involucre bracts 3–6 mm long **E. fontanum**

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